D R A F T

Scorecard at a Glance

Biological – Disease Outbreak

Goal: Preparedness and response provisions are in place to identify and respond to and recover from a biological disease outbreak.

Overall Performance Trend: ↑

Degree of State Influence: 🏛

Indicators:

- Medical Partnerships ↑
- Citizen Awareness ↑
- Agency Plans ↑
- Medicine Distribution ↑
- Equipment & Communications ↓
- Fatality Management ↑

Biological Attack

Goal: Preparedness and response provisions are in place to identify, respond to and recover from a biological attack.

Overall Performance Trend: ⌂

Degree of State Influence: 🏛

Indicators:

- Biological incident samples that test positive ⌂
- Number of biological incidents ⌂
- Number of responses ⌂
- Responder Preparedness ↑
- Medical Supplies & Distribution ↑
- Medical Surge ↑

Chemical Attack

Goal: Preparedness and response provisions are in place to respond and provide antidotes for nerve agent exposure.

Overall Performance Trend: ⌂

Degree of State Influence: 🏛

Indicators:

- Number of hazardous materials Incidents ⌂
- Number of chemical bombing ⌂
- Number of responses ⌂
- Agency Nerve Plans & Protocols →
- Specialized Equipment ↑
- Training ↑
- Monitoring →
- Medical Provider Preparedness ↑

Cyber Attack

Goal: Assure provisions to respond to and reconstitute essential communications and services following a cyber attack.

Overall Performance Trend: →

Degree of State Influence: 🏛

Indicators:

- Number of arrests for violation of 18.2-152.4 ↓
- Agency Plans →
- Facilities & Equipment ↑

Explosive Attack

Goal: Provisions are in place to respond to and recover from an explosive attack.

Overall Performance Trend: →

Degree of State Influence: 🏛

Indicators:

- Number of successful bombings →
- Number of defeated bombings →
- Number of bomb calls ↓
- Medical Supplies & Distribution ↑
- Medical Provider Preparedness ↑
- Medical Surge ↑

Natural Disaster - Flood

Goal: Preparedness and response provisions are in place to respond to and recover from natural disasters, including floods that may affect the Commonwealth.

Overall Performance Trend: ↑

Degree of State Influence: 🏛

Indicators:

- Flood Fatalities ↑
- Damage Assessment ↓
- Gauge Monitoring ↑
- Responder Readiness ↑
- Shelter Readiness ↑

D R A F T

Natural Disaster - Hurricane

Goal: Preparedness and response provisions are in place to respond to and recover from natural disasters, including hurricanes that may affect the Commonwealth.

Overall Performance Trend: ↑

Degree of State Influence: Significant

Indicators:

- Flood Fatalities ↑
- Declared Disasters ↓
- Damage Assessment ↓
- Citizen & Private Sector Preparedness ↑
- Evacuation Routes →
- Shelter Readiness ↑
- Communications →
- Hospital Readiness ↑

Natural Disaster - Winter Storm

Goal: Preparedness and response provisions are in place to respond to and recover from natural disasters, including winter storms that may affect the Commonwealth.

Overall Performance Trend: ↑

Degree of State Influence: Significant

Indicators:

- Winter Storm Declarations ↑
- Power Outage Management ↑
- Citizen Awareness ↑
- Healthcare Facility Readiness ↑
- Healthcare Facility Equipment ↑
- Reporting ↑

Radiological Attack

Goal: Preparedness and response provisions are in place to respond to and recover from a radiological attack.

Overall Performance Trend: ⌂

Degree of State Influence: Limited

Indicators:

- Number of incidents ⌂
- Number of responses ⌂
- Equipment ↑
- Medicine Distribution ↑
- Training & Exercises →

Legend

Performance Trend
- ↓ Worsening
- → Maintaining
- ↑ Improving
- ⌂ Baseline

Degree of State Influence
- Significant
- Limited

D R A F T

Biological – Disease Outbreak	
Definition	A disease outbreak may take the form of an influenza or plague. In both cases there is a high mortality rate in untreated cases and has the potential to be epidemic or pandemic. Current discussion includes preparation for an influenza pandemic as this has occurred every 10 to 60 years, with three occurring in the twentieth century (1918, 1957-1958, and 1967-1968). Influenza pandemics occur when there is a notable genetic change (termed genetic shift) in the circulating strain of influenza. Because of this genetic shift, a large portion of the human population is entirely vulnerable to infection from the new pandemic strain.
Threat to Virginia	As of January 31, 2008, the cumulative number of confirmed human cases of avian influenza A/(H5N1) confirmed by the World Health Organization is now 357, including 225 deaths (63%). Seventeen new cases outside the U.S. have been confirmed in January 2008. While the exposure history of some cases remains under investigation, most cases continue to be associated with exposure to sick or dead poultry, poultry markets or chicken slaughter houses. A threat to Virginia may exist when: • The virus has mutated to where sustained bird-to-human and/or human-to-human transmission is likely. • The virus is introduced into Virginia by infected birds as a result of seasonal migration patterns. • The virus is introduced into Virginia via exposed or infected international travelers.
Indicator Detail and Source	Virginia Department of Health performance measures: Medical Partnerships: Improve health provider surveillance and reporting. ⬆ Citizen Awareness: Maintains PanFlu webpage, including plans, educational links and promising practices. ⬆ Agency Plans: Develop Health-centric PanFlu Plan and collaborate on Commonwealth Emergency Operations Plan PanFlu Annex. ⬆ Medicine Distribution: Develop PanFlu antiviral and vaccine distribution protocols; include federal and private partnerships. ⬆ Equipment and Communications: Improve telecommuting capability, access to needed electronic files from offsite location, VPN use. ⬇ Fatality Management: Increase remains storage options. Increase stock and/or enhance access to fatality management supplies. Enhance planning interface between local and state planners. ⬇
Performance Trend	⬆ Improving Through training, exercises and education we are better prepared in the event of a disease outbreak.

Degree of State Influence	Limited The Commonwealth will not be able to prevent an outbreak and can only prepare to manage this type of event.

Biological Attack	
Definition	Biological agents are organisms or toxins that can kill or incapacitate people, livestock, and crops. The three basic groups of biological agents that would likely be used as weapons are bacteria, viruses, and toxins. Most biological agents are difficult to grow and maintain. Many break down quickly when exposed to sunlight and other environmental factors, while others, such as anthrax spores, are very long lived. Biological agents can be dispersed by spraying them into the air, by infecting animals that carry the disease to humans and by contaminating food and water. Delivery methods include: o Aerosols - biological agents are dispersed into the air, forming a fine mist that may drift for miles. Inhaling the agent may cause disease in people or animals. o Animals - some diseases are spread by insects and animals, such as fleas, mice, flies, mosquitoes, and livestock. o Food and water contamination - some pathogenic organisms and toxins may persist in food and water supplies. Most microbes can be killed, and toxins deactivated, by cooking food and boiling water. Most microbes are killed by boiling water for one minute, but some require longer. o Person-to-person - spread of a few infectious agents is also possible. Humans have been the source of infection for smallpox, plague, and the Lassa viruses.
Threat to Virginia	Based on information collected by the Virginia Department of Emergency Management, Virginia has been the scene of several bioterrorism incidents. The majority of these have been "suspicious powder" events and all have turned out to be hoaxes. Some of these were directed at sensitive targets, such as family planning clinics and state agencies. Virginia was involved in the September/October 2001, AMERANTHRAX incident and several citizens of the Commonwealth were impacted. Virginia has had at least one confirmed Ricin incident (Harrisonburg, Virginia). As a result, the threat to Virginia from hoaxes is high and the threat from actual biological attack is high. During calendar year 2007, the Counter-Terrorism and Criminal Interdiction Unit (CCIU) of the Virginia State Police responded to 17 potentially hazardous crime scenes. Additionally, the unit provided atmospheric monitoring at numerous special events. Source: Review of CCIU activities.
Indicator Detail and Source	Virginia Department of Emergency Management performance measures: Proportion of reported biological incident samples that test positive by the Division of Consolidated Laboratory Services (DCLS). Source: DCLS reports. ⌂ Number of biological incidents reported to the Virginia Department of Health and the Virginia Emergency Operations Center. Source: Virginia Department of Emergency Management HAZMAT Incident Reports; Virginia Department of Health Incident Reports. ⌂ Virginia State Police performance measures: Number of responses to potentially hazardous crime scenes: Current Value is

	17. Source: Review of CCIU activities. ⌂ Virginia Department of Health performance measures: Improve State and District Mass Prophylaxis Plans; assure Cities Readiness Initiative Modalities in place. ⇑ Responder Preparedness: Increase Medical Reserve Corps recruitment and training efforts. ⇑ Medical Supplies and Distribution: Improving Strategic National Stockpile receipt, distribution and administration readiness at state and local levels. (Received overall preparedness rating of 97% on 2007 CDC Technical Assistance Review.) ⇑ Medical Surge: Support Regional Hospital Coordinating Center preparedness on accommodating patient surge and diversions. ⇑
Performance Trend (VDEM)	⌂ Baseline The infrequent occurrence of these events (except "suspicious powder" events) makes it difficult to determine a trend. The baseline indicators above will be monitored over the next year to determine a rating for future trends.
Degree of State Influence	Limited

Chemical Attack	
Definition	Chemical agents are poisonous vapors, aerosols, liquids, and solids that have toxic effects on people, animals, or plants. They can be released by bombs or sprayed from aircraft, boats, and vehicles. They can be used as a liquid to create a hazard to people and the environment. Some chemical agents may be odorless and tasteless. They can have an immediate effect (a few seconds to a few minutes) or a delayed effect (2 to 48 hours). While potentially lethal, chemical agents are difficult to deliver in lethal concentrations. Outdoors, the agents often dissipate rapidly. Chemical agents also are difficult to produce. Chemical agents that might be used by terrorists range from warfare agents to toxic chemicals commonly used in industry. Nerve agents, blood agents, blister agents, heavy metals, volatile toxins, pulmonary agents, incapacitating agents, pesticides, and industrial chemicals are examples. Criteria for determining priority chemical agents include chemical agents already known to be used as weaponry; availability of chemical agents to potential terrorists; chemical agents likely to cause major morbidity or mortality; potential of agents for causing public panic and social disruption; and agents that require special action for public health preparedness. In addition to intentional attacks, accidents can happen underground, on railroad tracks or highways, and at manufacturing plants. A chemical attack could come without warning. Signs of a chemical release include people having difficulty breathing; experiencing eye irritation; losing coordination; becoming nauseated; or having a burning sensation in the nose, throat, and lungs. Also, the presence of many dead insects or birds may indicate a chemical agent release.
Threat to Virginia	Virginia has many chemical facilities and industries that use hazardous chemicals in production processes. Illicit drug manufacturing activities also produce hazardous chemical wastes. The Commonwealth has experienced chemical attacks in the form of irritant gases (mace, pepper spray, etc.) as separate events or as part of other criminal acts. It is theoretically possible to use industrial chemicals as chemical weapons although Virginia's experience in this is limited. Chemicals can also be used as part of explosive and incendiary devices.
Indicator Detail and Source	Virginia Department of Emergency Management performance measures: Number of hazardous materials incidents determined to be criminal in nature. Source: Virginia Department of Emergency Management HAZMAT Incident Reports. ⌂ Number of chemical bombing attacks. Source: FBI Bomb Data Center; Virginia State Police. ⌂ Virginia State Police performance measures: Number of responses to potentially hazardous crime scenes: Current Value is 17. Source: Review of CCIU activities. ⌂

	Virginia Department of Health performance measures: Annually update nerve agent plan and deployment protocols. ➡ Specialized Equipment: Maintain forward-deployed nerve agent (Chempack) caches with no CDC identified discrepancies noted during annual sustainment visits. ⬆ Training: Provide training material to Chempack administrators (hospitals, EMS) and conduct drills/exercises involving key stakeholders (hospitals, fire, EMS, law enforcement). ⬆ Monitoring: Maintain close relationship with Virginia Fusion Center on emerging threats and vulnerabilities. ➡ Medical Provider Preparedness: Support hospital preparedness efforts and decontamination provisions. ⬆
Performance Trend (VDEM)	⌂ Baseline The infrequent occurrence of these events (except "suspicious powder" events) makes it difficult to determine a trend. The baseline indicators above will be monitored over the next year to determine a rating for future trends.
Degree of State Influence	🏛 Limited

Cyber Attack	
Definition	Cyber terrorism attacks computers and networks, and the information contained within them. A cyber attack could potentially disrupt communications, banking systems, power systems, and emergency networks. Terrorist attacks typically occur without prior warning. There may, in some cases, be a heightened sense of hazard or alert, but there is rarely sufficient information available prior to an incident to allow for predicting the specific nature and time of an attack. The effects of terrorism can vary significantly from property damage and disruption of services (power, water, transportation, and communication), to injury and/or loss of life. An incident could directly impact a relatively small area (e.g. a single building) or a large area (multiple buildings or disrupted services throughout a city). Even a small terrorist incident could have multiple impacts spreading throughout a community, such as disruption of services, interruptions to businesses, banking, and communications systems, false alarms, and long term trauma to responders, witnesses, caregivers, and others.
Threat to Virginia	Section 18.2-152.4 of the Code of Virginia prohibits computer trespass. Specifically, it is unlawful for any person, with malicious intent, to: • Temporarily or permanently remove, halt, or otherwise disable any computer data, computer programs or computer software from a computer or computer network; • Cause a computer to malfunction, regardless of how long the malfunction persists; • Alter, disable, or erase any computer data, computer programs or computer software; • Effect the creation or alteration of a financial instrument or of an electronic transfer of funds; • Use a computer or computer network to cause physical injury to the property of another; • Use a computer or computer network to make or cause to be made an unauthorized copy, in any form, including, but not limited to, any printed or electronic form of computer data, computer programs or computer software residing in, communicated by, or produced by a computer or computer network; • Install or cause to be installed, or collect information through, computer software that records all or a majority of the keystrokes made on the computer of another without the computer owner's authorization; or • Install or cause to be installed on the computer of another, computer software for the purpose of (i) taking control of that computer so that it can cause damage to another computer or (ii) disabling or disrupting the ability of the computer to share or transmit instructions or data to other computers or to any related computer equipment or devices, including but not limited to printers, scanners, or fax machines. The Code of Virginia requires Executive Branch Agency Heads to report security

	incidents to the Chief Information Officer within 24 hours of the incident. The time for Commonwealth's Security's Incident Management Team is a matter of an hour or less generally. The amount of time to recover from a data exposure for either the government or the citizen is difficult to measure. Virginia has had services disrupted previously. Most interruptions were due to website defacements, viruses, and malware. Cost of service interruption is difficult to measure but is typically the time and effort of the restore. There is also the threat of data exposure of sensitive data held by the government. The cost of a data breach is primarily citizen confidence of the government agency or service as the cost of citizen notification and, perhaps most concerning, the potential of identity theft.
Indicator Detail and Source	Virginia State Police performance measures: Number of arrests for violation of 18.2-152.4. In 2005, there were 11 arrests made for violations of 18.2-152.4 in Virginia. The next year, there were 21 arrests made for this offense. In 2007, there were 33 arrests made, which constitutes a 200 percent increase from 2005. Current value is 33. Source: Arrest data maintained in the Virginia Computerized Criminal History System. ⇩ Virginia Department of Health performance measures: Agency Plans: Assure Continuity of Operations Planning provisions incorporate steps needed to address cyber-attack vulnerabilities. ⇒ Facilities and Equipment: Assure backup IT capability (alternate Disaster Recovery Site and servers) and access to vital records. ⇑
Performance Trend	⇒ Maintaining While arrests are on the increase the Commonwealth has put training, plans and equipment in place to prevent cyber attacks.
Degree of State Influence	Limited

Explosive Attack	
Definition	Terrorists have frequently used explosive devices as one of their most common weapons. Terrorists do not have to look far to find out how to make explosive devices; the information is readily available in books and other information sources. The materials needed for an explosive device can be found in many places including variety, hardware, and auto supply stores. Explosive devices are highly portable using vehicles and humans as a means of transport. They are easily detonated from remote locations or by suicide bombers. Conventional bombs have been used to damage and destroy financial, political, social, and religious institutions. Attacks have occurred in public places and on city streets with thousands of people around the world injured and killed. A conventional explosive device is the most likely weapon to be used by a terrorist due to ease of use, ability to obtain, and availability of detailed instructions to develop. This type of device may be used to cause rapid destruction or to disperse a biological, chemical, or radiological agent. Explosive devices containing these types of agents can be released covertly and are not readily detectable. Secondary attacks may be targeted against responders.
Threat to Virginia	The FBI Bomb Data Center statistics for the most recent available year (1999) suggests that Virginia is the scene of approximately 20 bombing events per year. Use of explosive devices and, especially, improvised explosive devises (IEDs) is well within the range of sophistication of all terrorist and criminal groups. Specifically in 2007, the Virginia State Police received 203 bomb calls. That figure includes the following: o 8 actual explosive devices o 17 hoax devices o 8 incendiary devices o 77 suspicious devices o 93 bomb threats
Indicator Detail and Source	Virginia State Police performance measures: Number of bombing incidents successfully carried out. Source: FBI Bomb Data Center; Virginia State Police. ➡ Number of bombing incidents defeated. Source: FBI Bomb Data Center; Virginia State Police. ➡ Number of Bomb Calls: Current Value is 203. Source: Bomb call data maintained in the Virginia State Police Field Activity Computerized Tracking System. ⬇ Virginia Department of Health performance measures: Medical Supplies and Distribution: Improve Strategic National Stockpile (SNS) receipt, distribution and administration readiness at state and local levels. Received overall preparedness rating of 97% on 2007 CDC Technical Assistance Review. SNS was expanded to include more trauma products to respond to burns and crushing injuries from a blast and building collapse. ⬆

	Medical Provider Preparedness: Support hospital preparedness efforts and decontamination provisions. ⬆ Medical Surge: Support Regional Hospital Coordinating Center preparedness on accommodating patient surge and diversion. ⬆
Performance Trend	➡ Maintaining
Degree of State Influence	🏛 Limited

Natural Disaster - Flood	
Definition	Floods are one of the most common hazards in the United States. Flood effects can be local, impacting a neighborhood or community, or very large, affecting entire river basins and multiple states. However, all floods are not alike. Some floods develop slowly, sometimes over a period of days. But flash floods can develop quickly, sometimes in just a few minutes and without any visible signs of rain. Flash floods often have a dangerous wall of roaring water that carries rocks, mud, and other debris and can sweep away most things in its path. Overland flooding occurs outside a defined river or stream, such as when a levee is breached, but still can be destructive. Flooding can also occur when a dam breaks, producing effects similar to flash floods.
Threat to Virginia	Flooding is the most common natural disaster in Virginia. Since 1957, Virginia has had 39 Presidential Disaster Declarations of which 24 were for flooding (not counting five Hurricane-specific declarations that all had a flooding component). Hurricane season brings an annual threat of flood events to the Commonwealth. In 2006, Tropical Storm Ernesto hit the Commonwealth on August 29 and caused flooding and high winds that killed seven people and caused an estimated $118 million in damage. Data from real-time stream gages maintained within the Commonwealth is used by the National Weather Service to predict timing and intensity of flooding events. Stream gage date in conjunction with precipitation data during non-flood events can be used to determine how specific watersheds might behave during precipitation events having the capacity to cause flooding. This ability can serve to save lives and property. FEMA reports that 241 Virginians were killed by floods from 1960 through 1995. From 2005-2007, there were 42 flood events reported in the Virginia Operational Information System where at least 3 roads in a district had to flood before it was classified as an event. Flooding events caused by severe storms, hurricanes, tropical storms and tropical depressions have plagued the Commonwealth of Virginia. Virginia's abundance of water, its many low-lying areas and its coastline make it particularly susceptible to flooding. Between 1996 and 2005, Virginia experienced 13 flood-related federally declared disasters, and 12 hurricanes tracked across the state, including Floyd, Jeanne, Isabel, Bonnie, Fran and Dennis. • Tropical Storm Gaston (2004): This storm stalled over the Commonwealth and dropped 12-14 inches of rain in Richmond in less than 10 hours, causing devastating flash floods. • Hurricane Fran (1996): Widespread 5-to-10-inch amounts of rain were recorded over the Middle Atlantic region with 14 to nearly 16 inches in parts of Virginia. Flood damage across the state totaled approximately $1 billion.

	• Severe Storm (June 1995): This was the worst flash flooding in Virginia since Camille in 1969. It is estimated that nearly 20 inches of rain fell in southwestern Madison County in less then 12 hours.
Indicator Detail and Source	Virginia Department of Emergency Management performance measures: Fatalities attributed to flood events. Source: Office of the Chief Medical Examiner. ⬆ Damages due to floods expressed in per capita and constant dollars for each flooding event. Source: FEMA. ⬇ Virginia Department of Environmental Quality performance measures: Metric: 191 real-time stream gages*. Source: Virginia Department of Environmental Quality Office of Surface Water Investigations. *74 gages maintained by the Department of Environmental Quality, 117 gages maintained by USGS. ⬆ Virginia Department of Health performance measures: Responder Readiness: Improve Office of Drinking Water and Office of Environmental Health Services awareness on response duties and communications. ⬆ Shelter Readiness: Prepared to support public and environmental health services staffing of local shelters. ⬆
Performance Trend	⬆ Improving Nationally, the trend is decreasing (improving) for deaths and increasing (worsening) for dollar impacts. Since our goal is to prepare our citizens in such a way that lives are not lost, this is interpreted as an improving trend.
Degree of State Influence	🏛 Significant Mitigation efforts can influence impacts markedly. Also, public awareness can result in decreased numbers of fatalities (i.e. – Don't drive through flooding, etc.). Source: Virginia Department of Emergency Management Public Affairs.

Natural Disaster – Hurricane	
Definition	Hurricanes are products of the tropical ocean and atmosphere. Powered by heat from the sea, they are steered erratically by the easterly trade winds and the temperate westerly winds, as well as by their own energy. As they move ashore, they bring with them a storm surge of ocean water along the coastline, high winds, tornadoes, torrential rains, and flooding. During a hurricane, homes, businesses, public buildings, and infrastructure may be damaged or destroyed by many different storm hazards. The three major hazards produced by a hurricane are the storm surge, high winds including tornadoes, and rainfall. Of these, the storm surge is by far the most dangerous, historically causing nine out of ten hurricane-related deaths. The high winds of a hurricane can also have a devastating effect on persons outdoors or inside unsound structures during the passage of the storm. Finally, although rainfall usually does not directly cause death in a hurricane, it may inundate potential evacuation routes and prevent persons from evacuating areas vulnerable to the storm surge if they do not evacuate in a timely manner.
Threat to Virginia	Since 1994, there have been 9 tropical events that have impacted Virginia with Hurricanes Fran, Floyd and Isabel providing the most serious damage. In the past 3 years, there have been 64 tropical events monitored but only 1, Tropical Storm Ernesto, had any significant impacts that resulted in a federal declaration. VDOT has worked to improve the evacuation issues for the Hampton Roads area and has added infrastructure to assist in this effort. Virginia's most widespread impacts and highest dollar impacts have been from hurricanes/tropical storms/tropical depressions. Virginia has had eight Presidential Disaster Declarations for hurricanes and tropical weather events since 1995. In the period from 1957 through 1994, Virginia had only one hurricane declaration (Hurricane Agnes in 1972).
Indicator Detail and Source	Virginia Department of Emergency Management performance measures: Fatalities attributed to flood events. Source: Office of the Chief Medical Examiner. ⇑ Number of communities declared as hurricane disaster area. Source: FEMA ⇓ Dollar amount for public assistance under hurricane disasters, expressed per capita and in constant dollars. Source: FEMA. ⇓ Virginia Department of Health performance measures: Citizen and Private Sector Preparedness: Promote enhancements to health provider facility emergency plans for evacuation and sheltering in place. Assist in plan reviews (nursing homes), collaborate on state agency emergency plan checklist for private sector facilities. ⇑ Evacuation Routes: Provide for the Office of Emergency Medical Services coordination assistance in Lane Reversal Plan. ⇒

	Shelter Readiness: Collaborate on identification of state managed shelters and draft a Health and Special Medical Services Plan Annex. ⬆ Communications: Position and routinely test emergency communications, e.g. GETS Cards, radios and satellite phones. ➡ Hospital Readiness: Support plans and activities to enhance the capability of hospitals as elements of the critical public infrastructure to sustain essential operations during and after a major hurricane event. ⬆
Performance Trend	⬆ Improving Costs tend to increase through time while loss of life tends to decrease. Source: FEMA. The number of hurricane and tropical weather events varies from year to year but the recent trend seems to be for more frequent storms of greater intensity. Source: NOAA/National Weather Service.
Degree of State Influence	🏛 Significant Government can mitigate impacts through planning, exercises, flood insurance and building code requirements (regulation) and through improved public awareness.

Natural Disaster – Winter Storm	
Definition	Heavy snowfall and extreme cold can immobilize an entire region. Even areas that normally experience mild winters can be hit with a major snowstorm or extreme cold. Winter storms can result in flooding, storm surge, closed highways, blocked roads, downed power lines and hypothermia.
Threat to Virginia	Winter storms can cause harmful circumstances including power outages, loss of heat and telephone services, strong damaging winds, fallen trees, flooding, icy roadways and freezing temperatures. Occasionally more damaging than hurricanes, Nor'easters have a deserved reputation as Virginia's worst winter storms. These storms can erode low-lying coastal areas with damaging surf, glaze the land with thick layers of ice or blanket wide swaths of the state under snow. Although Nor'easters usually form from November through April, they are often at their worst in January and February. Virginia has had six Presidential Disaster Declarations for winter storms since 1957 and all but one occurred in the period from 1994 through 2003. The greatest threat during winter storms is from power outage. For the past 3 years, Virginia has dealt with 57 snow/ice events at a cost of $216 million.
Indicator Detail and Source	Virginia Department of Emergency Management performance measures: Number of declarations for winter storms. Source: FEMA; Virginia Department of Emergency Management. ⬆ Number of customers experiencing power outages during winter storms. Source: Utilities, State Corporation Commission. ⬆ Virginia Department of Health performance measures: Citizen Awareness: Prepare stand-by public service announcements' on storm safety and reasons for increases in accidental deaths (hypothermia, improper portable generator use, falls, and improper use of safety equipment while operating equipment). ⬆ Healthcare Facility Readiness: Improve facility reporting/monitoring on emergency status. Support healthcare facility efforts to provide safe and reliable transportation to and from work for essential healthcare staff. ⬆ Healthcare Facility Equipment: Facilitate acquisition of generators and enhancements to evacuation/shelter-in-place plans. ⬆ Reporting: Improve Drinking Water Facility reporting of emergency outages to the Office of Drinking Water, local emergency management so as to expedite emergency water allocation provisions. ⬆
Performance Trend	⬆ Improving Number of declarations is expected to decrease due to changes in FEMA policy. Number of customers experiencing power outages should decrease (improve) through time as repairs and hardening to power grid improves. However, the number of customers is increasing and many may be in winter storm damage-prone areas.

Degree of State Influence	Significant

Radiological Attack	
Definition	Radiological: Radioactive materials are composed of atoms that are unstable. An unstable atom gives off its excess energy until it becomes stable. The energy emitted is radiation. Each of us is exposed to radiation daily from natural sources, including the sun and the earth. Small traces of radiation are present in food and water. Radiation also is released from man-made sources such as X-ray machines, television sets, and microwave ovens. Radiation has a cumulative effect. The longer a person is exposed to radiation, the greater the effect. A high exposure to radiation can cause serious illness or death. Nuclear: The detonation of a nuclear weapon will have catastrophic consequences. Surviving causalities near the detonation will be expectant due to the severity of radiation exposure. Casualties further from the detonation that have been exposed to the direct thermal effects will have first to third degree burns, serious wounds, and radiation exposure. Additional wounds may occur from secondary fires and related trauma. Patients will require medical and surgical products for supportive care and pharmaceuticals for emesis prevention, immune stimulation, and antibiotic prophylaxis. Radiological fallout will be a secondary consequence and is dependent upon wind and weather patterns. Dispersal Device includes any explosive device utilized to spread radioactive material upon detonation. In most cases these are weapons of mass disruption instead of mass destruction. Radiation exposure will typically be limited to the immediate area of the explosion. Prophylactic drugs such as potassium iodide have very little utility in this type of situation.
Threat to Virginia	There has never been an incident where radiological materials have been used in an actual attack worldwide. The degree of sophistication required for such an attack, however, is well within the abilities of dedicated groups. The materials are available, albeit most are regulated. However, during Calendar year 2007, the Virginia State Police responded to 17 potentially hazardous crime scenes. At one scene, the presence of radiological material was detected. Additionally, the unit provided atmospheric monitoring at numerous special events.
Indicator Detail and Source	Virginia Department of Emergency Management performance measures: Number of incidents involving radiological materials. Source: Virginia Department of Emergency Management Hazardous Materials Incident Reports. ⌂ Virginia State Police performance measures: Number of responses to potentially hazardous crime scenes: Current value is 17. Radiological material detection current value is 1. Source: Review of CCIU activities. ⌂ Virginia Department of Health performance measures: Equipment: Improve response capability by retiring antiquated equipment and procuring new radiological mobile lab for field monitoring, sample analysis and response team deployment. ⇧

	Medicine Distribution: Engage federal Stockpile partners on increasing availability of the chelating and ion exchange agents including DTPA, Neupogen and Prussian Blue. ⇑ Training and Exercises: Conduct training on public health duties in a nuclear/radiological event; participate in available nuclear WMD and radiological exercises. ⇒
Performance Trend	⌂ Baseline While the Commonwealth is increasingly prepared to manage the health response to a radiological attack, the data being collected that would indicate threat is at baseline. These indicators will be tracked to determine an overall performance trend.
Degree of State Influence	🏛 Limited